



PATENT  
Attorney Docket No.: SSI-02001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Maximilian A. Biberger et al.

Serial No.: 09/841,800

Filed: April 24, 2001

For: **METHOD OF DEPOSITING  
METAL FILM AND METAL  
DEPOSITION CLUSTER TOOL  
INCLUDING SUPERCRITICAL  
DRYING/CLEANING MODULE**

) Group Art Unit: 2825

) Examiner: Everhart, Caridad

) **SUPPLEMENTAL INFORMATION**  
) **DISCLOSURE STATEMENT**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313

Sir:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

United States Patents or Published Patent Applications have been filed electronically (EFS ID #50637); (EFS ID #50638); (EFS ID #50639); (EFS ID #50640); and (EFS ID #50641). Applicants have become aware of the following printed publication which may be material to the examination of this application:

- German Publication No. DE 39 04 514 C2;
- German Publication No. DE 39 06 724 C2;
- German Publication No. DE 39 06 735 C2;
- German Publication No. DE 39 06 737 A1;
- German Publication No. DE 40 04 111 C2;
- German Publication No. DE 43 44 021 A1;
- German Publication No. DE 44 29 470 A1;
- European Publication No. EP 0 518 653 B1;
- European Publication No. EP 0 620 270 A3;

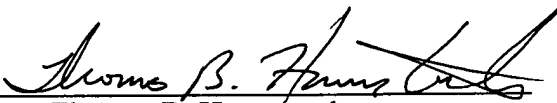
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- European Publication No. EP 0 679 753 A1;  
European Publication No. EP 0 711 864 B1;
- Japanese Patent Abstract JP 1-246835;
- Japanese Patent Abstract JP 8-186140;
- PCT Publication No. WO 93/14255;
- PCT Publication No. WO 93/14259;
- PCT Publication No. WO 93/20116;
- PCT Publication No. WO 96/27704;
- PCT Publication No. WO 00/73241 A1;
- PCT Publication No. WO 02/09894 A2;
- PCT Publication No. WO 02/11191 A2;
- PCT Publication No. WO 02/16051 A2;
- “Porous Xerogel Films as Ultra-Low Permittivity Dielectrics for ULSI Interconnect Applications”, Materials Research Society, pp. 463-469, 1997;
- Kawakami et al, “A Super Low-k ( $k=1.1$ ) Silica Aerogel Film Using Supercritical Drying Technique “, IEEE, pp. 143-145, 2000;
- R.F. Reidy, “Effects of Supercritical Processing on Ultra Low-K Films”, Texas Advanced Technology Program, Texas Instruments, and the Texas Academy of Mathematics and Science;
- Anthony Muscat, “Backend Processing Using Supercritical CO<sub>2</sub>”, University of Arizona;
- D. Goldfarb et al., “Aqueous-based Photoresist Drying Using Supercritical Carbon Dioxide to Prevent Pattern Collapse”, J. Vacuum Sci. Tech. B 18 (6), 3313 (2000);
- H. Namatsu et al., “Supercritical Drying for Water-Rinsed Resist Systems”, J. Vacuum Sci. Tech. B 18 (6), 3308 (2000); and
- N. Sundararajan et al., “Supercritical CO<sub>2</sub> Processing for Submicron Imaging of Fluoropolymers”, Chem. Mater. 12, 41 (2000).

This Supplemental Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that anyone or more of these citations constitutes prior art.

Respectfully submitted,  
HAVERSTOCK & OWENS LLP


Dated: 11-14-03

By:   
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Attorneys for Applicants

CERTIFICATE OF MAILING (37 CFR § 1.8(a))  
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- 3 -

HAVERSTOCK & OWENS LLP  
Date: 11-14-03 By: 

FORM PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: SSI-02001	Serial No.: 09/841,800			
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use Several Sheets If Necessary)				Applicants: Maximilian A. Biberger et al.				
(37 CFR § 1.98(b))				Filing Date: April 24, 2001, Group Art Unit: 2825				
<b>FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS</b>								
		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation	
							Yes	No
	AA	DE 39 04 514 C2	08/23/90	Germany	D 06 L	1/00		X
	AB	DE 39 06 724 C2	09/13/90	Germany	D 06 P	1/90		X
	AC	DE 39 06 735 C2	09/06/90	Germany	D 06 L	3/00		X
	AD	DE 39 06 737 A1	09/13/90	Germany	D 06 M	11/59		X
	AE	DE 40 04 111 C2	08/23/90	Germany	D 06 L	1/00		X
	AF	DE 43 44 021 A1	06/29/95	Germany	D 06 P	1/16		X
	AG	DE 44 29 470 A1	03/02/95	Germany	D 06 P	5/04		X
	AH	EP 0 518 653 B1	12/16/92	EPO	D 06 L	1/02		X
	AI	EP 0 620 270 A3	10/19/94	EPO	C11D	7/50		X
	AJ	EP 0 679 753 B1	11/02/95	EPO	D06F	43/00		X
	AK	EP 0 711 864 B1	05/15/96	EPO	D06G	1/00		X
	AL	JP 1-246835	10/02/89	Japan	H 01 L	21/304		X
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	AQ	WO 93/14259	07/22/93	PCT	D06M	11/76		X
	AR	WO 93/20116	10/14/93	PCT	C08F	14/18		X
	AS	WO 96/27704	09/12/96	PCT	D06L	1/00		X
	AT	WO 00/73241 A1	12/07/00	PCT	C04B	35/622		X
	AU	WO 02/09894 A2	02/07/02	PCT	B08B			X
	AV	WO 02/11191 A2	02/07/02	PCT	H01L	21/00		X
	AW	WO 02/16051 A2	02/28/02	PCT	B05D			X
<b>OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)</b>								
	AX	"Porous Xerogel Films as Ultra-Low Permittivity Dielectrics for ULSI Interconnect Applications", Materials Research Society, pp. 463-469, 1997.						
	AY	Kawakami et al, "A Super Low-k (k=1.1) Silica Aerogel Film Using Supercritical Drying Technique ", IEEE, pp. 143-145, 2000.						
	AZ	R.F. Reidy, "Effects of Supercritical Processing on Ultra Low-K Films", Texas Advanced Technology Program, Texas Instruments, and the Texas Academy of Mathematics and Science.						
	BA	Anthony Muscat, "Backend Processing Using Supercritical CO2", University of Arizona.						
	BB	D. Goldfarb et al., "Aqueous-based Photoresist Drying Using Supercritical Carbon Dioxide to Prevent Pattern Collapse", J. Vacuum Sci. Tech. B 18 (6), 3313 (2000).						
	BC	H. Namatsu et al., "Supercritical Drying for Water-Rinsed Resist Systems", J. Vacuum Sci. Tech. B 18 (6), 3308 (2000).						
	BD	N. Sundararajan et al., "Supercritical CO2 Processing for Submicron Imaging of Fluoropolymers", Chem. Mater. 12, 41 (2000).						
	BE							
	BF							
Examiner:					Date Considered:			
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								